

## **REMARKS**

### **A. BACKGROUND**

The present Amendment is in response to the Office Action mailed January 21, 2010. Claims 21 and 23-24 have been amended. Claims 21-24 remain pending for consideration.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicant requests that the Examiner carefully review any references discussed below to ensure that Applicant's understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

### **II. Claim Objections**

Claims 21 and 23 are objected to because of an informality involving alleged incorrect hyphen usage. In response, Applicant has amended claims 21 and 23 to delete the hyphen. Withdrawal of the claim objection is respectfully requested.

Claim 21 is further objected to under 37 CFR 1.75 as being a substantial duplicate of claim 23, and claim 22 is similarly objected as being a substantial duplicate of claim 24. Applicant respectfully disagrees. Whereas in claim 21 SiO<sub>2</sub> is optionally present, in claim 23 SiO<sub>2</sub> is definitively present. As such, Applicant has amended claim 23 to depend from claim 21 and to positively recite that SiO<sub>2</sub> is present. Therefore, claims 21 and 23 are now not substantial duplicates. Withdrawal of this rejection is respectfully requested.

Claim 24 now depends from claim 22 and recites that the SiO<sub>2</sub> in an amount of up to 15 wt.% is present in the solid support, which necessarily results in claim 22 not being a substantial duplicate of claim 24. Withdrawal of this rejection is respectfully requested.

### **III. Claim Rejections Under 35 U.S.C. § 112, Second Paragraph**

Claims 21-24 are rejected under 35 USC 112, second paragraph, as being indefinite due to an alleged improper Markush language. In response, Applicant has amended claims 21 and

23-24 so that the claims are definite. With regard to claim 22, Applicant respectfully requests reconsideration because the phraseology is not indefinite and is well understood by one of ordinary skill in the art.

A skilled person understands “obtainable according to a process” is inevitably clear that the composition is obtained according to that process because otherwise it would not be obtainable. It is submitted that a composition of the present invention is novel (which was not put into question by the Examiner) and is unobvious as shown below, e.g. even evidenced by the presentation of a further Declaration (submitted herewith) and thus is patentable. For such patentable composition the inventors are entitled to product claims. Restriction to a specific preparation process would result in claims which are prone to circumvention and therefore would violate inventor rights. To violate inventor rights, however, is certainly not the intention of any patent office. Thus, it is submitted that the expression “obtainable” in claim 22 is fully justified. Withdrawal of this rejection is respectfully requested.

#### **IV. Claim Rejections Under 35 U.S.C. § 103(a)**

Claims 21-24 are rejected under 35 USC 103(a) as being unpatentable over Kleemann in view of Reddy, which documents are now of record. Applicant respectfully traverses because a *prima facie* case of obviousness has not been established.

In response to the rejections recited in the Office Action, inventor Dr. Karl Schermanz provides a Declaration that shows that the presently claimed invention is patentable and not obvious over the combination of Kleemann and Reddy. In part, the combination of Kleemann and Reddy does not result in the presently claimed invention.

In the rejection of the claims, the Office Action alleged that merely combining a protocol from Kleemann and a protocol from Reddy would result in the presently claimed invention. However, the Office Action did not provide any evidence that such a combination of processes has a likelihood of successfully arriving at the presently claimed invention. Due to chemical technologies such as the present invention being unpredictable, evidence of predictability is required, but none was provided to support the allegations. This lack of predictability rebuts the allegation that the claimed invention is obvious.

In view of the Declaration filed herewith, Applicant respectfully asserts that the combination of Kleemann and Reddy does not result in the presently claimed invention.

Particularly, combining the processes of Kleemann and Reddy does not result in the presently claimed process of preparing a catalyst composition. As such, combining Kleemann and Reddy does not result in a “solid support containing  $\text{TiO}_2$  in an amount of at least 70 wt.%,  $\text{WO}_3$  in an amount of 5-20 wt.%, and optionally  $\text{SiO}_2$  in an amount of up to 15 wt.% [being] contacted with a vanadate ( $\text{REVO}_4$ ) of at least one rare earth metal (RE) selected from the group consisting of Y, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Er and Yb to give a slurry which is brought to dryness and calcined,” as recited in claim 21 (emphasis added). Particularly, neither reference teaches forming a slurry with a solid support and a  $\text{REVO}_4$  which is then calcined. First, Kleemann teaches producing a monolith honeycomb that has a  $\text{TiO}_2/\text{WO}_3$  attached there to as a “coating,” which is a monolith and **NOT** a slurry. Second, Kleemann teaches contacting the monolith having the  $\text{TiO}_2/\text{WO}_3$  with  $\text{NH}_4\text{VO}_3$  which results in the  $\text{NH}_4\text{VO}_3$  impregnated into the monolith structure, which again is **NOT** a slurry. Third, the monolith having  $\text{TiO}_2/\text{WO}_3$  with  $\text{NH}_4\text{VO}$  is calcined. In Reddy, a slurry of  $\text{V}_2\text{O}_5/\text{CeO}_2/\text{SiO}_2$  is calcined to result in  $\text{CeVO}_4$ . Reddy does not teach to further remove the  $\text{CeVO}_4$  and to prepare a slurry of the  $\text{CeVO}_4$  and a solid support that is further calcined. As such, Reddy does not teach or suggest contacting  $\text{CeVO}_4$  with a solid support to form a slurry that is then calcined. Accordingly, combining Kleemann and Reddy does not teach the present invention because neither reference teaches contacting a  $\text{CeVO}_4$  with a solid support to form a slurry that is then calcined. Thus, the presently claimed process of claims is not taught or suggested by the combination of Kleemann and Reddy.

Additionally, combining the processes of Kleemann and Reddy do not result in a  $\text{CeVO}_4$  being present, as shown by the experimental data of the Declaration filed herewith. The Declaration shows that combining Kleemann and Reddy does not produce a  $\text{CeVO}_4$  as shown in Graph 1 of Appendix B. On the other hand, when  $\text{CeVO}_4$  is present, it would show up on the XPD, as shown in Graph 2. Thus, combining Kleemann and Reddy does not teach or suggest each and every element of the presently pending claims.

Additionally, Applicant respectfully asserts that there is no valid reason to make the combination of Kleemann and Reddy. First, Kleemann teaches catalysts for ammonia absorption, where the catalyst is a  $\text{TiO}_2/\text{WO}_3$ . Nothing in Kleemann has any relevance to a  $\text{REVO}_4$ . Second, Reddy is directed to the surface characterization of  $\text{CeO}_2/\text{SiO}_2$  and  $\text{V}_2\text{O}_5/\text{CeO}_2/\text{SiO}_2$ , where it was found that calcined  $\text{V}_2\text{O}_5/\text{CeO}_2/\text{SiO}_2$  can produce  $\text{CeVO}_4$ . This indicates that  $\text{CeVO}_4$  is on the  $\text{V}_2\text{O}_5/\text{CeO}_2/\text{SiO}_2$  support. Nothing in Reddy indicates

that it would be beneficial to have the CeVO<sub>4</sub> on a TiO<sub>2</sub>/ WO<sub>3</sub> support. Therefore, there is no nexus that provides a valid reason for Kleemann and Reddy to be combined.

The mere fact that Kleemann and Reddy both teach catalysts is not reason enough to make a combination because there must be a valid reason to make the combination. The selection of two unrelated catalysts for combination could only be made from improper hindsight, and using the Applicant's application as a road map. From the teachings of Kleemann, there is nothing to provide a valid reason to combine the catalyst TiO<sub>2</sub>/ WO<sub>3</sub> with a REVO<sub>4</sub>. From the teachings of Reddy, there is no reason to remove the CeVO<sub>4</sub> and combine the CeVO<sub>4</sub> with the TiO<sub>2</sub>/ WO<sub>3</sub> to form a slurry that is then calcined. The only possible way to make this combination is through improper hindsight and reconstruction of the Applicant's claimed invention.

In view of the foregoing, a *prima facie* case of obviousness has not been established because of at least the following reasons: combining Kleemann and Reddy does not result in the claimed process; there is no valid reason to combine Kleemann and Reddy because there is no valid nexus to make the combination; and the combination of Kleemann and Reddy could only be made by using the Applicant's claims as a roadmap and then using improper hindsight to make the proposed combination. As such, claims 21-24 are allowable over the combination of Kleemann and Reddy, and Applicant respectfully request withdrawal of this rejection.

### **Conclusion**

In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to **Deposit Account No. 23-3178**: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to **Deposit Account No. 23-3178**.

Dated this 20<sup>th</sup> day of May, 2010

Respectfully submitted,

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